

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER

IN RE: NATIONAL PARK SERVICE-WOLVERTON
Water System No. 5410503

TO: MR. PAUL SCHWARZ, PUBLIC HEALTH SANITARIAN
NATIONAL PARK SERVICE-WOLVERTON
47050 GENERALS HIGHWAY
THREE RIVERS, CA 93271

CITATION FOR NONCOMPLIANCE
WITH THE SURFACE WATER TREATMENT RULE

April and May 2014

Issued on July 9, 2014

Section 116650, Chapter 4, Part 12, Division 104 of the California Health and Safety Code (CHSC), authorizes the issuance of a citation for failure to comply with a requirement of the California Safe Drinking Water Act, or any regulation, standard, permit, or order issued hereunder.

VIOLATION

The State Water Resources Control Board, Division of Drinking Water (hereinafter 'Division') hereby issues a Citation to the National Park Service-Wolverton Water System (hereinafter 'Water System'), for failure to comply with Sections 64652(a), 64653(h), 64654(a) and 64654(b) of Title 22, California Code of Regulations (CCR). Specifically, during the month of April 2014 the Water System's (mailing address: 47050 Generals

1 Highway, Three Rivers, CA 93271) Wolverton surface water treatment plant (SWTP) failed
2 to comply with disinfection treatment requirements for *Giardia lamblia* cyst inactivation
3 and the Lodgepole SWTP failed to comply with Permit Provision No. 7(a) of the Domestic
4 Water Supply Permit issued to NPS-Lodgepole on May 27, 2011.

5
6 The Water System currently operates under Domestic Water Supply Permit No. 03-12-12P-
7 001 issued by the Department of Public Health Drinking Water Program in January 2012
8 and Domestic Water Supply Permit No. 03-12-11P-003 issued by the Department of Public
9 Health Drinking Water Program in May 2011 for NPS-Lodgepole. The Division is in the
10 process of drafting the new Domestic Water Supply Permit for the Water System for the
11 consolidation of NPS-Lodgepole and the addition of the MIOX mixed oxidant system.

12
13 The Water System is classified as a community water system serving a reported residential
14 population of approximately 40 persons through 132 service connections. The Water
15 Systems utilizes raw surface water from the Sillman Creek and Wolverton Creek and
16 groundwater from Well No. 1 as the source of supply. The raw surface water from the
17 Sillman Creek was being treated by the means of an inline filtration plant (Lodgepole
18 SWTP), an alternative technology, with processes that include: inline coagulant injection,
19 mixing, pressure filtration and disinfection. Additionally, the raw surface water from the
20 Wolverton Creek was being treated by the means of a slow sand filtration plant (Wolverton
21 SWTP) with processes that include filtration and disinfection.

22 23 **Lodgepole SWTP Violation**

24 Section 64653 (h) of the CCR specifies that the Division's approval of alternative filtration
25 technologies, including establishment of performance standards and monitoring
26 requirements, shall be done in accordance with the permit process specified in section
27 116525 through 116550 of the Health and Safety Code. Permit condition 7(a) of the

1 Domestic Water Supply Permit No. 03-12-11P-003 issued to NPS-Lodgepole on May 27,
2 2011, specifies that the turbidity level of the combined filter effluent water shall be less than
3 or equal to 0.1 NTU in 50 percent of the measurements taken each month. The turbidity
4 level of the filtered water shall not exceed 1.0 NTU for more than eight consecutive hours
5 while the plant is in operation. For the month of April 2014, the 50th percentile was 0.18
6 NTU.

7

8 **Wolverton SWTP Violation**

9 CCR Section 64652(a) specifies that each supplier using an approved surface water source
10 shall provide multibarrier treatment that meets the requirements of the Surface Water
11 Filtration and Disinfection Treatment Regulations (SWTR) and reliably ensures that at least
12 a total of 99.9 percent (3.0-log) reduction of *Giardia lamblia* cysts and 99.99 percent (4.0-
13 log) reduction of viruses is achieved through filtration and disinfection. The SWTR
14 provides a 2.0-log removal credit for *Giardia lamblia* cysts and a 1.0-log removal credit for
15 viruses through slow sand filtration treatment as provided by the Water System at the
16 Wolverton SWTP. To comply with Section 64654(a) of the SWTR, the Wolverton SWTP
17 must provide an additional 1.0-log inactivation of *Giardia lamblia* cysts and a 3.0-log
18 inactivation of viruses through disinfection.

19

20 The Water System is required to calculate a daily disinfectant pathogen inactivation (CT)
21 ratio in order to determine the effectiveness of the disinfection treatment. This effectiveness
22 is dependent on various factors including temperature, pH, the chlorine residual, and the
23 contact time. The Wolverton SWTP was equipped with one (1) 100,000 gallon clearwell
24 tank, in which CT was provided.

25

26 The Water System utilizes free chlorine as the method of disinfection at the Wolverton
27 SWTP. The Water System is required to provide a daily CT ratio of at least 1.0 at the

1 Wolverton SWTP to determine compliance with disinfection inactivation requirements and
 2 monitor the performance of the disinfection process. This ratio is determined by the amount
 3 of CT achieved in relation to the amount of CT that is required. The Wolverton SWTP
 4 failed to maintain a daily CT ratio of 1.0 or greater for six (6) days in April 2014 and one
 5 (1) day in May 2014. These failures are summarized below in Table 1:

6 **Table 1: CT Ratio Failure Dates**

| 7 Date | CT Ratio | Calculated Log Inactivation |
|--------------|----------|--------------------------------|
| 8 4/2/2014 | 0.5 | 0.5 |
| 9 4/11/2014 | 0.8 | 0.8 |
| 10 4/17/2014 | 0.1 | 0.1 |
| 11 4/20/2014 | 0.6 | 0.6 |
| 12 4/21/2014 | 0.6 | 0.6 |
| 13 4/22/2014 | 0.5 | 0.5 |
| 14 5/2/2014 | 0.8 | 0.8 |

15 All approved surface water sources utilized by a supplier shall be provided with continuous
 16 disinfection treatment sufficient to insure that the total treatment process provides
 17 inactivation of *Giardia lamblia* cysts and viruses, in conjunction with the removals obtained
 18 through filtration, to meet the reduction requirements specified in Section 64652(a).

19 Section 64654(b)(1) specifies that water being delivered to the distribution system shall not
 20 contain a disinfectant residual of less than 0.2 mg/l for more than four hours in any 24 hour
 21 period. The Water System failed to provide a disinfectant residual of at least 0.2 mg/l
 22 entering the distribution system for more than four hours on the following dates: April 17,
 23 April 20 through April 22, May 2 and May 7, 2014.

24 **NOTIFICATION REQUIREMENTS**

25 Section 64666 (a) requires a surface water system to notify its consumers whenever there is
 26 a failure to comply with the treatment requirements specified in Sections 64652, 64653 and
 27

1 64654. Public notification for violations of Sections 64652, 64653 and 64654 of the SWTR
2 is included in Attachment A. Proof of Public Notification (Attachment B) must be
3 submitted to the Division within ten (10) days of disseminating Attachment A. The Water
4 System must either mail or hand-deliver the notice to all of its customers.

5
6 Section 64663 (b) and (c) require the Water System to notify the Division as soon as
7 possible, but no later than by the end of the next business day, or within 24 hours,
8 whichever is less, by telephone or other equally rapid means whenever: (b) There is a
9 failure to maintain a minimum disinfectant residual of 0.2 mg/L in the water being
10 delivered to the distribution system. The supplier shall report whether or not the disinfectant
11 residual was restored to at least 0.2 mg/L within four hours. (c) An event occurs which may
12 affect the ability of the treatment plant to produce a safe potable water including but not
13 limited to spills of hazardous materials in the watershed and unit treatment process failures.
14 The Water System failed to notify the Division within the 24 hours of the treatment failure.

15

16 **DIRECTIVES**

17 The National Park Service-Wolverton Water System is hereby directed to take the
18 following actions. Failure to comply with the Directives of this citation may result in
19 additional enforcement actions.

20

21 1. The Water System shall submit a written report to the Division by **August 15, 2014**,
22 describing:

23 (a) The cause of the failure to provide adequate pathogen inactivation at the
24 Wolverton SWTP, as measured using the CT ratio, and any corrective actions
25 taken,

26 (b) The cause of the failure to provide adequate turbidity removal at the Lodgepole
27 SWTP, and

1 (c) Any necessary operational changes that will be made to prevent future turbidity
2 and disinfection treatment failures.

3
4 2. The Water System shall calculate CT daily and notify the Division no later than by
5 the end of the next business day or within 24 hours when the calculated CT ratio on
6 any given day is below 1.0.

7
8 3. The Water System shall minimize the use of the Lodgepole SWTP as it routinely
9 has difficulty complying with the turbidity standard due to runoff in the spring and
10 summer months. Should the turbidity of the combined filter effluent begin to trend
11 above the turbidity standard the water system should cease operation of the
12 Lodgepole SWTP immediately.

13
14 4. The Water System shall provide public notification to all customers by mail or
15 hand-delivery by **July 25, 2014**, informing them that the water did not meet the
16 turbidity requirements of the SWTR during the month of April 2014 and the
17 disinfection treatment requirements of the SWTR during the months of April and
18 May 2014. The public notification is included in Attachment A. The Water System
19 shall provide proof of publication of the notification and a copy of the public
20 notification to the Division by **August 15, 2014**. A copy of this form is included as
21 Attachment B.

22
23 5. All submittals required by this Citation shall be addressed to:

24 Tricia A. Wathen, P.E., Senior Sanitary Engineer
25 State Water Resources Control Board
26 Division of Drinking Water
27 Southern California Branch
Drinking Water Field Operations
265 W. Bullard Avenue, Suite 101
Fresno, CA 93704

CIVIL PENALTIES

Sections 116650(d) and 116650(e) of the CHSC allow for the assessment of a civil penalty for failure to comply with requirements of the California Safe Drinking Water Act. Failure to comply with any provision of this Citation may result in the Division imposing an administrative penalty of not less than \$100 (one hundred dollars) per day as of the date of violation of any provision of this Citation.

Date

July 9, 2014Tricia A. Wathen

Tricia A. Wathen, P.E.
Senior Sanitary Engineer, Visalia District
SWRCB, Division of Drinking Water
DRINKING WATER FIELD OPERATIONS BRANCH

TAW/BP

Attachments:

Attachment A: Public Notification Form
Attachment B: Proof of Notification Form



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

NPS-Wolverton Did Not Meet Treatment Requirement (Disinfection & Turbidity)

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we are doing to correct this situation.

In order to ensure proper disinfection, water in the treatment plant must be in contact with chlorine or a similar disinfectant for a minimum amount of time. On April 2, April 11, April 17, April 20 through April 22 and May 2, 2014, this did not occur at the Wolverton surface water treatment plant. Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the "contact time", depends on the amount of disinfectant in the water and the temperature of the water.

In addition, we routinely monitor your water for turbidity (cloudiness) which tells us whether we are effectively filtering the water supply. Water samples for April 2014 from the Lodgepole surface water treatment plant showed that 83.4% of turbidity measurements taken monthly were over 0.1 turbidity units. The standard is that no more than 50 percent of samples may exceed 0.1 turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity levels at the Lodgepole surface water treatment plant are 0.08 turbidity units.

What should I do?

- **You do not need to boil your water or take other actions.**
- This is not an emergency. If it had been, you would have been notified immediately. Tests taken during this same time period did not indicate the presence of bacteria in the water.
- *Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.* These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1(800) 426-4791.
- If you have other health issues concerning the consumption of this water, you may wish to consult with your doctor.

What happened? What is being done?

[Describe corrective action]. [Disinfectant residual levels/contact times] so far this month have met all requirements.

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).
- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by NPS-Wolverton.

State Water System ID#: 5410503.

Date distributed: _____.

PROOF OF NOTIFICATION
(Return with copy of Notice)

As required by Section 116450 of the California Health and Safety Code, I notified all users of water supplied by the **National Park Service-Wolverton Water System** (water system) of the failure to meet the **California Surface Water Treatment Rule – Contact Time and Turbidity** for the months of **April and May 2014** as directed by the Department.

Notification was made on _____ (date) by

hand delivered and/or mailed and/or posted written notice.
(circle all completed)

Signature of Water System Representative

Print Name

Date

DISCLOSURE: Be advised that Section 116725 and 116730 of the California Health and Safety Code state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the attached order may be liable for a civil penalty not to exceed five thousand dollars (\$5,000) for separate violation for each day that violation continues. In addition, the violators may be prosecuted in criminal court and upon conviction, be punished by a fine of not more than \$25,000 for each day of violation, or be imprisoned in the county jail not to exceed one year, or by both the fine and imprisonment.

Due by August 11, 2014

System No.: 5410503

Enforcement Action No.: 03-12-14C-010